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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,127	08/18/2003	YuQing Yang	1339-CA (P192 C1)	3503

7590 02/23/2004

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EXAMINER

JEAN PIERRE, PEGUY

ART UNIT	PAPER NUMBER
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2819

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,127

Applicant(s)

YANG ET AL.

Examiner

Peguy JeanPierre

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 17 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 021203.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 33-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 34 line 2 recites "... for sampling of a charge ... onto a third capacitor...". A third capacitor is not described in the specification, nor shown in the drawings. In addition, it is not clear from the specification which capacitor the claim is referring to. There is no support in the specification and in the drawings for this recitation; a reference capacitor, an integrating capacitor and a sampling capacitor are described in the specification. Please clarify. No new matter must be entered.

Furthermore, the added limitations of claim 33 of "a substantial portion of the summed charge" (page 6, line 2) is not described in the specification, the drawing does not clearly illustrate this particular limitation. There is no support in the specification for this particular limitation. No new matter must be entered.

Claim 34 is rejected as understood by the Examiner. The capacitor is regarded as "another sampling capacitor" since it is used to sample the input voltage.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

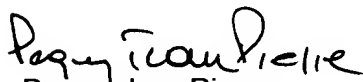
3. Claims 16-17 and 28-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujimori (USP 5,790,064).

Fujimori discloses in Figure 3 a method of operating a switched capacitor integrator that operates to sample ($\phi 1D$) a reference voltage of a selected polarity (V_{ref}) into an input plate (Crp) or (another capacitor) of a reference capacitor, sample ($\phi 1D$) an input signal onto a sampling (Cs) capacitor or (a capacitor), both sampling phases occur on the same sampling phase ($\phi 1D$) (see col. 2, lines 55-60). During a first period of an integrating phase ($\phi 2D$) transfer the sampled charges from the reference and input sampling capacitors to a common node by closing on switches ($\phi 21D$) and ($\phi 1$) and during a second phase of the integration phase transferring all of the charges from the common node (node coupled to (Cs or Crp) and ($\phi 2$)) to an integrating capacitor (Ci). Figure 6 further discloses the graph of the sampling ($\phi 1$ and $\phi 1D$) integrating ($\phi 2$ and $\phi 2D$) phases of the switching circuitry that can be accurately implemented in response to a control signal (see Fig. 7). In Figure 8, Fujimori also discloses a delta sigma modulator that forms a portion of an analog to digital converter. The modulator comprises an integrator (50), an operational amplifier 52) and a DA converter (54). The integrator as illustrated in Figure 3, further comprises an operational amplifier that

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comprises an integration capacitor (C_i) that couples an output of the operational amplifier to an input node of the amplifier, a first and a second feedback paths each including a capacitor that sample reference charges (V_{ref} , V_{ref-}) of selected polarities onto the first and the second capacitors during the sampling phase. In addition, Fujimori discloses another capacitor (that can be considered as a third capacitor) that samples the input signal source during a sampling phase (see Fig. 3).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peguy JeanPierre whose telephone number is (571) 272-1803. The examiner fax phone number is (571) 273-1803.


Peguy JeanPierre
Primary Examiner